

Applicant: Robert RICHARDSON et al.
Appl. No.: 10/734,605

REMARKS

Applicants thank the Examiner for the careful consideration of this application. Claims 1, 2, 4, 5, 7, and 12 are currently pending. Claims 1, 2, 4, and 7 have been amended. Claims 3, 6, and 8-11 have been cancelled, without prejudice. New claim 12 has been added. Based on the foregoing amendments and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 102

The Office Action rejected claims 8-10 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,873,757 to Williams. As noted above, claims 8-10 have been cancelled, without prejudice, thereby rendering this rejection moot.

Rejections under 35 U.S.C. § 103(a)

The Office Action rejected claim 11 under 35 U.S.C. § 103(a) as being obvious over Williams in view of U.S. Patent No. 4,506,320 to Koronczi et al. As noted above, claim 11 has been cancelled, without prejudice, thereby rendering this rejection moot.

The Office Action rejected claims 1-4 under 35 U.S.C. § 103(a) as being obvious over Williams. Claim 3 has been cancelled, and the subject matter thereof has been incorporated into independent claim 1.

Independent claim 1 recites a transformer comprising, *inter alia*, a secondary winding comprising two coils, each coil including a rectifier diode *as an integrated part of the coil*. An exemplary embodiment of a transformer having a rectifier diode as an integrated part of the coil is disclosed, for example, in paragraph 15 of the application as filed, and shown in accompanying

Figures 3 and 4.

The Examiner acknowledged in paragraph 4 of the Office Action that “Williams does not disclose the rectifier diode being as an integrated part of the coil.” However, the Examiner stated that “[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to have the rectifier diode as an integrated part of the coil, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art.” The Applicants respectfully disagree that Williams renders the claimed invention obvious.

It would *not* have been obvious to one of ordinary skill in the art to make the rectifier diodes 80 of Williams an integrated part of the coils that make up the secondary windings SY1, SY2, SY3. First, Williams provides absolutely no motivation or suggestion to integrate the rectifier diodes 80 with the respective coils. In addition, Williams is completely silent about *how* one would make the rectifier diodes 80 an integrated part of the respective coils, and how to do so would not have been obvious to one of ordinary skill in the art.

Moreover, the claimed invention provides advantages over the prior art that would not have been obvious to one of ordinary skill in the art. For one, making the rectifier diode an integrated part of the coil reduces stray capacitance, which is usually an important issue with transformers. In addition, the claimed invention employs multiple parallel-connected small rectifier diodes, which has the advantage of eliminating a heat sink and any additional assemblies necessitated by a larger external rectifier. The invention has the effect of reducing stray capacitance to a very low level, typically less than ten picofarads, avoiding the need for a heat

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sink. Applicants submit that the claimed construction and the resulting advantages would not have been obvious to one of ordinary skill in the art.

For the above reasons, Applicants submit that independent claim 1 is patentable over Williams. Claims 2 and 4 depend from claim 1, and are allowable for the same reasons, as well as for reciting additional features.

The Office Action rejected claims 5-7 under 35 U.S.C. § 103(a) as being obvious over Williams in view of U.S. Patent No. 4,507,531 to Teich et al. Claim 6 has been cancelled, without prejudice, and replaced by new claim 12. Claims 5, 7, and 12 depend from claim 1, which, as demonstrated above, is patentable over Williams. Teich does not remedy the deficiencies of Williams. Therefore, independent claim 1, as well as dependent claims 5, 7, and 12, are patentable over any combination of Williams and Teich.

Conclusion

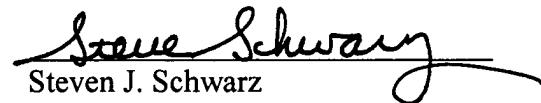
All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants, therefore, respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

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Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

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